

Electronic equipment protection for reliable operations

AEGIS delivers a higher level of system protection



There is an increasing need and/or requirement of surge protection and line filtering in today's distribution systems.

Studies have shown that the failure to protect sensitive electronic loads cost the American manufacturing, commercial, and services industries more than \$39 billion per year in lost time and revenue. This underscores the need for facility-wide surge protection applied at all stages of the electrical distribution system, from the electrical service entrance down to critical single-phase loads.

With a broad-range of devices, the Eaton AEGIS™ series is helping original equipment manufacturers (OEMs) adopt best-in-class surge and line protection solutions that meet specific requirements in global commercial and industrial applications to support reliable operation and reduce maintenance costs due to damaged electrical equipment.

The AEGIS series hybrid filter reacts instantly to changes in voltage regardless of phase angle or polarity. In comparison to other line filters, this technology provides a higher level of suppression, reliability and life expectancy.

By providing surge protection and filtering, AEGIS protective devices can suppress the noise and transients prevalent throughout the power distribution system to help ensure critical equipment is always operating in peak condition in applications including:

- Instrumentation
- Water treatment facilities
- Pulp and paper operations
- HVAC systems
- Petrochemical and refinery installations
- Food processing
- Textiles
- Automotive assembly
- Manufacturing operations
- Medical and lab testing equipment
- PLC control systems

Applications

AEGIS PH and PV

- Lowest voltage protection rating (VPR) is desired
- Best EMI/RFI filtering
- Longest equipment life and lowest maintenance cost
- 120 or 240 Vac circuits up to 20 A are to be protected

AEGIS CF

- Higher kA of protection
- Good EMI/RFI filtering
- Communication line protection is needed
- 120/230/240 Vac or 24/48 Vdc circuits up to 60 A are to be protected

AEGIS CN

- Only surge and transient voltage protection is needed
- 120/230 Vac or 24/48 Vdc circuits up to 30 A are to be protected

AEGIS DN

- Only surge and transient voltage protection is needed
- 120–600 Vac, 12/24/48 Vdc or 1000/1500 Vdc circuits are to be protected



Powering Business Worldwide

Standards and certifications

UL® 1449 5th Edition is the latest and most significant set of safety tests a surge protection device (SPD) manufacturer must pass before a product can be used to protect devices connected to the power distribution system. UL 1283 7th Edition is the standard for electromagnetic interference (EMI) filters connected to 600 V or lower circuits. It is also CSA® marked.



Customers needing a line filter incorporating both surge protection and EMI filtering should look for devices that are UL 1449 5th Edition-certified and complementary listed to UL 1283 7th Edition. These types of line filters employ surge suppression circuitry and filtering to prevent downtime and equipment damage due to transients and electrical line noise. Eaton AEGIS series devices are among the first in the industry to meet these standards, which became mandatory in April 2014.

Features

- Compact design with multiple mounting options
- Meets new UL safety standards for surge and filtering protection
- AC models available with up to 80 kA surge current capacity ratings
- DIN rail mounting available on most models
- Contains no replaceable parts or items that require periodic maintenance
- Alarm contacts available
- Five- to ten-year warranty standard dependent on model; warranty extended an additional five years if registered
- RoHS compliant

The breadth of Eaton's AEGIS series' features, options and configurations ensures that the correct unit is available for all critical electrical applications, including control panels, security systems, measurement systems, lab equipment and other point-of-use applications.

Configurations

Eaton AEGIS series devices are available in a wide range of features and ratings for a variety of applications.

Catalog numbering system

Product family	Protection/filtering	Voltage	Amperage	Options
AG	PH = Premium protection with hybrid filtering	120 = 120 Vac 240 = 240 Vac	03 = 3 A 05 = 5 A 10 = 10 A 15 = 15 A 20 = 20 A	
	PV = Premium protection with filtering	120 = 120 Vac 240 = 240 Vac	01 = 1 A 03 = 3 A 05 = 5 A	
	CF = Critical protection with filtering	120 = 120 Vac 240 = 240 Vac	10 = 10 A	DIN2 = DIN mount (1-inch wide) CP = Compact ❶
		024 = 24 Vdc 048 = 48 Vdc	10 = 10 A	DIN = DIN mount (2.5-inch wide)
		230 = 230 Vac	15 = 10 A	Optional DIN mount kit DINRAILKIT-30ACF
		120 = 120 Vac 230 = 230 Vac	30 = 30 A	RJ = Telcom protection and Form C status contacts Optional DIN mount kit DINRAILKIT-30ACF
	CN = Critical protection without filtering	120 = 120 Vac 230 = 230 Vac 024 = 24 Vdc 048 = 48 Vdc	60 = 60 A ❷	RJ = Telcom protection and Form C status contacts Optional DIN mount kit DINRAILKIT-60ACF
			30 = 30 A	
	DN = DIN rail surge protection without filtering	120 = 120 Vac 240 = 240 Vac 277 = 277 Vac 400 = 400 Vac 480 = 480 Vac 600 = 600 Vac	10R = 1 mode (single-phase) 20R = 2 modes (two-phase) ❸ 30R = 3 modes (three-phase) 40R = 4 modes (three-phase + neutral) ❹	
		012 = 12 Vdc 024 = 24 Vdc 048 = 48 Vdc		
1000PV = 1000 Vdc 1500PV = 1500 Vdc		30LR = solar		

- ❶ Only available in the 10 A, 120 Vac CF version.
 ❷ Only available in the 120 Vac version.
 ❸ 20R typically used for split-phase.
 ❹ 40R not available in 600 Vac versions.

AEGIS summary

Specifications	PH	PV	CF	CN	DN	DN	DN solar
Voltage	120/240 Vac	120/240 Vac	120/240 Vac ❶ 24/48 Vdc	120/230 Vac ❶ 24/48 Vdc	120/240/277/ 400/480/600 Vac	12/24/48 Vdc	1000 Vdc 1500 Vdc
Current range	3–20 A	1–5 A	10–60 A	30 A	—	—	—
DIN mounting	Yes	Yes	Yes ❷	No	Yes	Yes	Yes
UL 1283 7th Edition and UL 1449 5th Edition	Yes	Yes	Yes ❸	Yes ❸	Yes ❸	No	Yes ❸
Filtering	Yes	Yes	Yes	No	No	No	No
EMI/RFI filtering attenuation at 100 kHz	75 dB	50 dB	40 dB	—	—	—	—
Peak kA per phase / mode	60/30	40/20	80/40	80/40	50/25	20/10	40/20
UL nominal discharge current (I _n)	5 kA	5 kA	5 kA	5 kA	20 kA	10 kA	15–20 kA
UL voltage protection rating (VPR) L–G / L–N ❹	330/400	330/400	500/500	500/500	—	—	—
Short-circuit current rating (SCCR)	5 kA	5 kA	10 kA	10 kA	100–200 kA	—	50–65 kA
Alarm contacts	Yes	No	Yes ❺	No	Yes	No	Yes
Standard warranty / registered warranty (years)	10/15	10/15	5/10	5/10	1/1.5	1/1.5	1/1.5
Communication line protection (UL 497A)	No	No	Yes ❻	No	No	No	No

❶ Voltage rating of 240 Vac applies to CF24010-DIN2 unit only. Voltage rating of 230 Vac applies to 15 and 30 A units.

❷ Standard on 10 A, optional on 15 A, 30 A and 60 A with DIN mounting kit.

❸ Vac models only.

❹ Ratings shown for 120 Vac models; other voltages listed in Technical Data.

❺ Optional on 30 A and 60 A models only.

❻ UL 1449 5th Edition only.

AEGIS PH and PV specifications

Specification	PH 120 Vac	PH 240 Vac	PV 120 Vac	PV 240 Vac
	3, 5, 10, 15, 20 A	3, 5, 10, 15, 20 A	1, 3, 5 A	1, 3, 5 A
DIN mounting	Yes	Yes	Yes	Yes
UL 1283 7th Edition and UL 1449 5th Edition	Yes	Yes	Yes	Yes
RoHS compliant	Yes	Yes	Yes	Yes
Filtering	Yes	Yes	Yes	Yes
EMI/RFI filtering attenuation at 100 kHz	75 dB	75 dB	50 dB	50 dB
L–G, L–N and N–G protection modes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	60/30	60/30	40/20	40/20
UL nominal discharge current (I _n)	5 kA	5 kA	5 kA	5 kA
UL voltage protection rating (VPR) L–G / L–N / N–G	330/400/330	600/700/600	330/400/330	600/700/600
MCOV	150	275	150	275
Short-circuit current rating (SCCR)	5 kA	5 kA	5 kA	5 kA
Alarm contacts	Yes	Yes	No	No
Standard warranty / registered warranty (years)	10/15	10/15	10/15	10/15
Communication line protection (UL 497A)	No	No	No	No

CF specifications

Specifications	CF 24 Vdc		CF 48 Vdc		CF 120 Vac				CF 230 Vac		CF 240 Vac
	10 A	10 A	10 A	10 A	10 A	10 A	30 A	60 A	15 A	30 A	10 A
DIN mounting	Yes	No	Yes	No	Yes	No	Yes ❶	Yes ❶	No	Yes ❶	Yes
UL 1283 7th Edition and UL 1449 5th Edition	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Filtering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMI/RFI filtering attenuation at 100 kHz	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB
L–G, L–N and N–G protection modes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	6/2	6/2	20/6	20/6	30/10	40/20	80/40	80/40	24/8	56/24	30/10
UL nominal discharge current (I _n)	—	—	—	—	3 kA	5 kA	5 kA	5 kA	—	—	3 kA
UL voltage protection rating (VPR) L–G / L–N / N–G	—	—	—	—	500/500/500	500/500/500	500/500/500	500/500/500	—	—	900/800/900
MCOV	30	30	50	50	150	150	150	150	275	275	275
Short-circuit current rating (SCCR)	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA
Alarm contacts	No	No	No	No	No	No	No	No	No	No	No
Standard warranty / registered warranty (years)	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10
Communication line protection (UL 497A)	No	No	No	No	No	No	Yes ❶	Yes ❶	No	Yes ❶	No

❶ Optional.

AEGIS CN specifications

	24 Vdc	48 Vdc	120 Vac	230 Vac
Specifications	30 A	30 A	30 A	30 A
DIN mounting	No	No	No	No
UL 1283 7th Edition and UL 1449 5th Edition	—	—	Yes	Yes
RoHS compliant	—	—	Yes	Yes
Filtering	No	No	No	No
EMI/RFI filtering attenuation at 100 kHz	—	—	—	—
L–G, L–N and N–G protection modes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	20/6	46/20	80/40	56/24
UL nominal discharge current (I _n)	—	—	5 kA	—
UL voltage protection rating (VPR) L–G / L–N / N–G	—	—	500/500/500	—
MCOV	30	50	150	275
Short-circuit current rating (SCCR)	10 kA	10 kA	10 kA	10 kA
Alarm contacts	No	No	No	No
Standard warranty / registered warranty (years)	5/10	5/10	5/10	5/10
Communication line protection (UL 497A)	No	No	No	No

AEGIS DN specifications

Specifications	12 Vdc	24 Vdc	48 Vdc	120 Vac	240 Vac	277 Vac	400 Vac	480 Vac	600 Vac	1000 Vdc	1500 Vdc
DIN mounting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL 1449 5th Edition	No ❶	No ❶	No ❶	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
L–G, L–N and N–G protection modes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	—
Peak kA per phase	20 kA	20 kA	20 kA	50 kA	50 kA	50 kA	50 kA	50 kA	35 kA	40 kA	40 kA
UL nominal discharge current (I _n)	10 kA	10 kA	10 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	10 kA
UL voltage protection rating (VPR) L–G / L–N / N–G	—	—	—	600 V	900 V	1000 V	1500 V	2000 V	2500 V	2500 V	4000 V
MCOV	15	28	52	150	300	350	480	550	750	1000	1500
Short-circuit current rating (SCCR)	—	—	—	200 kA	150 kA	200 kA	200 kA	200 kA	200 kA	50 kA	65 kA
Alarm contacts	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Standard warranty / registered warranty (years)	12/18	12/18	12/18	12/18	12/18	12/18	12/18	12/18	12/18	12/18	12/18

❶ UL 497B 4th Edition.

For details, please visit EatonCanada.ca/Surge
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